

29 October 1993

LIQUID FUELS

(Selfridge ANGB)

1. Objective. As prescribed in AFI 38-201, Air Force Manpower Determinant (AFMD) System, formerly designated as AFR 8-10, this ANGMS quantifies the full-time manpower requirement to accomplish the tasks described in the work center description (WCD) for varying levels of workload volume.

2. Authority. AFI 23-205, Fuels Management, formerly AFR and ANGR 144-1 series of Air Force (AF) and Air National Guard (ANG) directives contain command policy and procedural guidance for the Liquid Fuels work center. This ANGMS has been developed in accordance with procedures contained in AFPAM 38-208, Air Force Management Engineering Program (MEP) Processes, formerly AFR 25-5, 16 May 88. This ANGMS is the result of a functional review study.

3. Applicability. This standard applies only to the 127 Fighter Wing (FW), Michigan Air National Guard, Selfridge ANGB MI, Liquid Fuels work center. This standard applies to peacetime operations only.

4. Standard Data:

- a. Classification. Type III.
- b. Approval Date. 22 Jun 93.
- c. Man-hour Data Source. Operational Audit (historical record and technical estimate techniques).
- d. Standard Man-hour Equation. $Y = 454.7 + .3451X_1 + 1.370X_2 + .01724X_3 + 2.155X_4 + .07359X_5$.
- e. Workload Factors (WLFs):

(1) Titles:

- (a) X_1 = A Gallon of Aviation Fuel Received.
- (b) X_2 = A Gallon of Aviation Fuel Issued.
- (c) X_3 = A Gallon of Cryogenics Product Received.
- (d) X_4 = A Quality Control Sample Drawn.
- (e) X_5 = An Accounting Transaction Processed.

(2) Definitions:

- (a) X_1 = The average monthly number of gallons of aviation fuel (in thousands) received by the Fuels work center.
- (b) X_2 = The average monthly number of gallons of aviation fuel (in thousands) issued to a host or transient aircraft by the Fuels work center.
- (c) X_3 = The average monthly number of gallons of liquid oxygen and liquid nitrogen received by the Fuels work center.
- (d) X_4 = The average monthly number of quality control samples drawn (minus the liquid oxygen test) by the Fuels work center.
- (e) X_5 = The average monthly number of accounting transactions processed by the Fuels work center.

(3) Source:

- (a) X_1 = Monthly Fuels Management Data Report (M-34). "Aviation Receipts" page of the M-34, under the "Mode" column (Commercial Truck, Government Truck rows), total the "Receipts-Monthly Gallons" column. Divide the total gallons by 1,000 to derive the monthly WLF value.

(b) X_2 :

1. Monthly Fuels Management Data Report (M-34); "Aviation Refuel" page. Under the "Refuel Method" column, count only the AF total aviation gallons issued.
2. Fuels Sales Analysis Report (M-27); total the AFRES aviation gallons issued.
3. To obtain the monthly WLF value, subtract the AFRES fuel issued from the total AF Aviation Fuel Issued. Divide by 1,000 to derive the monthly WLF value.

- (c) X_3 = AF Form 1237, Inventory (Fuels/Missile Propellants), on file in the Fuels work center. Count the number of gallons of Liquid Oxygen received in column "B" of the AF Form 1237 on a calendar month basis to derive the monthly WLF value.

- (d) X_4 = AFTO Form 150, Base Fuels Sampling and Testing Record, or computer product, on file in the Fuels work center. Obtain the monthly samples drawn count by subtracting the first sample of a calendar month from the last sample of the calendar month. From this total subtract the liquid oxygen odor tests performed to derive the monthly WLF value.

(e) X_5 = Monthly Fuels Management Data Report (M-34):

1. Aviation Fuels: M-34 Report, count the total monthly transactions listed under "Method for Refuel/Defuel" for all aviation fuels.

No. of Printed Pages: 15

OPR: ANGR/XPME (Maj Castleberry)

Approved by: Maj Gen Killey

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Distribution: F, X

2. Ground Fuels: M-34 Report, count the total monthly issue transactions for all ground fuels issued.
3. Obtain the Monthly transactions processed by adding the Aviation "Refuels/Defuels" and all "Ground fuels" issued to derive the monthly WLF values.

5. Application Instructions:

- a. The valid man-hour range for this ANGMS is 1569.77 through 2616.29.
- b. The AF Form 1113, Standard Manpower Table, is an aggregate of total manpower by specialty title and AFSC. The six categories, Bulk Storage, Fuels Distribution, Cryogenics, Quality Control, Inspection and Management are combined to make efficient use of all functional manpower. The application instructions are as follows:

- (1) Determine the values for the five WLFs identified in paragraph 4e.
 - (2) Substitute the appropriate WLF value into the man-hour equation for X_1 , X_2 , X_3 , X_4 , and X_5 . Solve the equation to obtain the total man-hours (Y).
 - (3) Divide the total man-hours (Y) by the appropriate Civilian Man-hour Availability Factor (MAF) to determine the total manpower requirements.
NOTE: To determine whole manpower requirements, apply ANG standard application procedures using the Fractional Manpower Range Table.
 - (4) On the AF Form 1113, attachment 2, find the column in which the number of total requirements fall; then read up to determine manpower by AFSC.
- c. Title V and Title 32 positions are represented in this work center.

6. Statement of Conditions. This work center's normal hours of operation are 16 hours a day, 6 days a week; plus 8 hours each Sunday. There are no other standard of living constraints which affect the daily operation of this work center.

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2 Attachments
1. Work Center Description
2. Standard Manpower Table

WORK CENTER DESCRIPTION**Liquid Fuels****(Selfridge ANGB)****DIRECT:****1. BULK STORAGE OPERATION:****1.1. INSPECTS SYSTEM AND PERFORMS PREVENTIVE MAINTENANCE:****1.1.1. PERFORMS DAILY INSPECTION AND PREVENTIVE MAINTENANCE.****1.1.2. PERFORMS WEEKLY INSPECTION AND PREVENTIVE MAINTENANCE.****1.1.3. PERFORMS MONTHLY INSPECTION AND PREVENTIVE MAINTENANCE.****1.2. PERFORMS PRODUCT INVENTORY:****1.2.1. TRAVELS FOR PRODUCT INVENTORY:****1.2.1.1. TRAVELS THROUGH FUELS STORAGE SYSTEM FOR BULK STORAGE INVENTORY.** Travels for the purpose of gauging bulk storage tanks; includes aviation fuel and deicing fluid petroleum products.**1.2.1.1.1. TRAVELS TO AND FROM ABOVE GROUND STORAGE TANK.****1.2.1.1.2. TRAVELS TO AND FROM UNDERGROUND STORAGE TANK.****1.2.1.2. TRAVELS TO AND FROM CYLINDER STORAGE AREA FOR GASEOUS MISSILE PROPELLANT INVENTORY.** Travels for the purpose of conducting an inventory of gaseous missile propellant cylinders.**1.2.2. INVENTORIES BULK STORAGE TANK.** Gauges and records fuel measurement and temperature on AF Form 1235, Physical Inventory (Fuels/Missile Propellants); includes aviation fuel and deicing fluid products.**1.2.2.1. INVENTORIES ABOVE GROUND STORAGE TANK.****1.2.2.2. INVENTORIES UNDERGROUND STORAGE TANK.****1.2.3. INVENTORIES GASEOUS MISSILE PROPELLANT CYLINDER.** Inventories gaseous missile propellant cylinder and annotates AF Form 1235.**1.2.4. INVENTORIES DEICING FLUID TANK.****1.3. RECEIVES TANK TRUCK SHIPMENT OF BULK PETROLEUM PRODUCT:****1.3.1. PREPARES FOR RECEIPT:****1.3.1.1. POSITIONS STORAGE TANK RECEIPT VALVE BEFORE AND AFTER RECEIPT.** Opens storage tank receipt valves. Closes tank receipt valves upon completion of receipt.**1.3.1.2. INSPECTS TANK TRUCK.** Checks shipping documents, inspects seals, verifies fuel level and capacity markers, and performs fuel quality check.**1.3.2. RECEIVES PRODUCT.** Opens fuel header receipt valve, monitors fuel system, and stops receipt when all tank truck compartments are empty and/or when fuel header receipt valve is closed.**1.3.3. COMPLETES RECEIPT DOCUMENT.** Completes and signs DD Form 250, Material Inspection and Receiving Report, and other delivery receipt documents.**1.4. RECEIVES PETROLEUM PRODUCT RETURNED TO BULK FROM MOBILE UNIT:****1.4.1. POSITIONS RECEIPT VALVE BEFORE AND AFTER RECEIPT.** Positions storage tank receipt valves.

1.4.2. RECEIVES PRODUCT. Examines fuel flow and monitors fuel system during receipt.

1.4.3. COMPLETES RECEIPT DOCUMENT.

1.4.4. TRAVELS TO AND FROM BULK STORAGE FOR MOBILE UNIT RETURNED PRODUCT.

1.5. ISSUES BY FILLSTAND:

1.5.1. PREPARES TO ISSUE. Aids mobile unit operator in positioning refueling unit, verifies type of fuel to be issued, attaches refueling unit grounding cable, positions wheel chocks, assists vehicle operator in connecting single point nozzle to refueling unit, zeros pump meter, opens fillstand issue valves, and tests fuel level cutoff switch.

1.5.2. ISSUES PRODUCT. Starts fillstand pumps and monitors fuel system.

1.5.3. CLOSSES OUT ISSUE. Closes fillstand receiver valves, stops pumps, assists driver in removing hose, removes grounding cable, performs walk around, and completes paperwork.

1.5.4. TRAVELS TO AND FROM FILLSTAND. Travels to fillstand and returns for product issue.

1.6. TRANSFERS BULK PETROLEUM PRODUCT TO HYDRANT:

1.6.1. PREPARES FOR TRANSFER.

1.6.2. ESTABLISHES COMMUNICATION.

1.6.3. OPENS VALVE, TRANSFERS PRODUCT, AND CLOSSES VALVE.

1.6.4. COMPLETES PAPERWORK.

1.6.5. TRAVELS TO AND FROM BULK STORAGE AREA.

2. FUELS DISTRIBUTION:

2.1. MAINTAINS FUELING VEHICLE AND EQUIPMENT:

2.1.1. TRANSPORTS VEHICLE AND EQUIPMENT:

2.1.1.1. TRANSPORTS VEHICLE AND EQUIPMENT TO MAINTENANCE.

2.1.1.2. TRANSPORTS VEHICLE AND EQUIPMENT FROM MAINTENANCE.

2.1.2. REVIEWS AND COORDINATES SCHEDULED MAINTENANCE. Reviews vehicle and equipment periodic maintenance schedule; coordinates with Fuels Control Center (FCC), Quality Control and Inspection (QC&I), and Transportation Refueling Maintenance Shop.

2.1.3. PERFORMS VEHICLE/EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION. Obtains inspection forms, travels to inspection area, performs vehicle/specialized equipment checkpoint inspection, records and corrects minor discrepancy, and advises FCC, QC&I, and Maintenance shop of maintenance discrepancy.

2.1.3.1. PREPARES FOR VEHICLE/EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION. Obtains inspection forms and travels to the inspection point.

2.1.3.2. PERFORMS SPECIAL PURPOSE VEHICLE PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION.

2.1.3.3. PERFORMS GENERAL PURPOSE VEHICLE PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION.

2.1.3.4. PERFORMS NONPOWERED EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION.

2.1.3.5. PREPARES VEHICLE/EQUIPMENT FOR TRANSPORTATION TO MAINTENANCE.

2.1.4. WASHES VEHICLE. Washes vehicle, cleans cab interior, and cleans component compartments.

2.1.5. PERFORMS CORROSION CONTROL. Scrapes, sands, and spot paints corroded areas on interior and exterior of vehicle and equipment.

2.1.6. CHANGES VEHICLE TIRE. Removes and replaces tire.

2.1.6.1. CHANGES INSIDE/OUTSIDE DUAL TIRE.

2.1.6.2. CHANGES FRONT TIRE.

2.1.7. MAINTAINS VEHICLE OPERATOR MAINTENANCE GUIDE. Completes vehicle inspection form and files completed form.

2.2. PERFORMS MOBILE TRAVEL:

2.2.1. TRAVELS FROM FCC TO SERVICING LOCATION TO PERFORM REFUEL.

2.2.2. TRAVELS AFTER REFUEL:

2.2.2.1. TRAVELS TO NEXT SERVICING LOCATION TO PERFORM REFUEL.

2.2.2.2. TRAVELS BACK TO FCC.

2.2.2.3. TRAVELS TO REFILL POINT. Travels to Bulk Storage for refill.

2.2.2.4. TRAVELS TO NEXT SERVICING LOCATION. Upon completion of refill, travels to next servicing location as directed by the FCC.

2.2.2.5. TRAVELS TO FCC. Upon completion of refill, travels to FCC.

2.2.3. TRAVELS FROM FCC TO SERVICING LOCATION TO PERFORM DEFUEL.

2.2.4. TRAVELS AFTER DEFUEL:

2.2.4.1. TRAVELS BACK TO FCC.

2.2.4.2. TRAVELS TO BULK STORAGE TO RETURN PRODUCT TO BULK.

2.2.5. TRAVELS TO FCC AFTER RETURNING PRODUCT TO BULK.

2.3. ISSUES FUEL OR OTHER PRODUCT BY MOBILE REFUELER:

2.3.1. PRECHECKS FUELER.

2.3.2. POSITIONS SERVICING UNIT. Annotates time arrived at servicing location, proceeds at Crew Chief's signal, and positions servicing unit.

2.3.3. PREPARES FUELER FOR SERVICING.

2.3.4. PERFORMS FUELING OPERATION:

2.3.4.1. PERFORMS FUELING OPERATION, 1 - 700 GALLONS.

2.3.4.2. PERFORMS FUELING OPERATION, 701 - 1500 GALLONS.

2.3.4.3. PERFORMS FUELING OPERATION, 1501 - 2200 GALLONS.

2.3.4.4. PERFORMS FUELING OPERATION, MORE THAN 2200 GALLONS.

2.3.4.5. ISSUES DEICING FLUID.

2.3.4.6. ISSUES GROUND FUEL.

2.4. DEFUELS FUEL:**2.4.1. PRECHECKS FUELER.**

2.4.2. POSITIONS SERVICING UNIT. Annotates time arrived at servicing location, proceeds at Crew Chief's signal, and positions servicing unit.

2.4.3. PREPARES FUELER FOR DEFUEL SERVICING.**2.4.4. PERFORMS DEFUELING OPERATION:****2.4.4.1. PERFORMS DEFUELING OPERATION, 1 - 700 GALLONS.****2.4.4.2. PERFORMS DEFUELING OPERATION, 701 - 1500 GALLONS.****2.4.4.3. PERFORMS DEFUELING OPERATION, 1501 - 2200 GALLONS.****2.4.4.4. PERFORMS DEFUELING OPERATION, MORE THAN 2200 GALLONS.**

2.4.5. COMPLETES SERVICING OPERATION. Completes fuel accounting documents and prepares fueler for departure.

2.4.6. RETURNS PRODUCT TO BULK:**2.4.6.1. AWAITS SERVICING.**

2.4.6.2. RETURNS PRODUCT. Monitors fueling equipment.

2.4.6.3. COMPLETES DOCUMENTATION AND CONTACTS FCC.

2.5. OPERATES FCC. Operates FCC; includes liquid oxygen (LOX) and liquid nitrogen (LIN), ground fuel, etc.

2.5.1. RECEIVES SERVICE REQUEST. Receives request from Job Control or other authorized agency and annotates Daily Fuels Request and Service Log (Fuels Log).

2.5.2. DISPATCHES FUELS OPERATOR. Checks control status board and determines vehicle/equipment availability, ensures operator qualification, alerts fuels operator; obtains and issues clipboard, portable radio, and operator checklist; and instructs and dispatches operator to service point or bulk storage.

2.5.3. RECEIVES AND RECORDS INFORMATION. Monitors operation by communicating with operator, records information, and monitors all product movement.

2.5.4. RECEIVES AND FILES FUELS CLIPBOARD. Receives and stores fuels clipboard, portable radio, and checklist; compares issue/defuel transaction document with Fuels Log, and makes necessary correction.

2.5.5. COORDINATES OPERATOR ASSISTANCE REQUEST. Receives and coordinates operator assistance request with Base Support Agency and Fuels Management personnel, maintains contact with operator to ensure coordinated request has been complied with, resolves flightline crew delays; resolves vehicle and equipment maintenance failure, and resolves personnel requirement problem.

2.5.6. COORDINATES SPECIAL FUEL REQUEST. Receives and coordinates special fuel request prior to aircraft arrival on base.

2.5.7. COORDINATES PRIORITY FUELS REQUEST. Reviews and coordinates request for special mission fuel.

2.5.8. MAINTAINS RECORD OF SPECIFIC DATA. Maintains record of specific event on reverse side of Fuels Log and informs affected personnel.

2.5.9. COMPLETES TRANSACTION SUMMARY. Annotates Fuel Log from AF Form 839, Consolidated Flightline Fuels Service Log; categorizes issue, enters total number of product issues by category, and enters delay in the Fuels Log.

2.5.10. MAINTAINS FUELS CONTROL STATUS BOARD CONSOLE AND PERSONNEL QUALIFICATION ROSTER. Receives and annotates data change, informs affected personnel, and briefs incoming shift supervisor.

2.5.11. EMBOSSES AND ISSUES AIRCRAFT FUELING IDENT-A-PLATE. Reviews aircraft maintenance log, embosses data on blank aircraft fueling ident-a-plate, and coordinates and issues card to authorized customer.

2.5.12. MAINTAINS AND CONTROLS FUELS MANAGEMENT FACILITY AND EQUIPMENT KEY. Issues, receives, and controls Fuels Management facility and equipment key.

2.5.13. MAINTAINS ROSTER. Maintains and verifies vehicle roster, organization tank roster, custodian roster, and cash sales roster.

2.5.14. MAINTAINS AND CONTROLS EQUIPMENT AND CHECKLIST. Inventories and checks condition of radio and charger. Ensures clipboard, checklist, and local operational procedure are current.

3. CRYOGENIC FLUID SUPPORT:

3.1. INSPECTS AND MAINTAINS LIQUID OXYGEN/LIQUID NITROGEN (LOX/LIN) STORAGE TANK:

3.1.1. PERFORMS DAILY INSPECTION. Reviews technical order (T.O.) form, inspects tank for serviceability, inspects LOX/LIN site, corrects discrepancy, and completes paperwork.

3.1.2. PERFORMS PERIODIC INSPECTION (180 DAYS). Obtains needed tools, performs LOX/LIN storage area inspection in accordance with (IAW) work card, and completes paperwork.

3.1.3. PERFORMS SPECIAL INSPECTION (360 DAYS). Obtains tools and support equipment, initiates safety procedure, performs LOX storage area inspection, purges tank IAW T.O. and work cards, corrects discrepancies, completes paperwork, and stows equipment.

3.2. INSPECTS AND MAINTAINS LOX/LIN TANK MAINTENANCE SUPPORT EQUIPMENT:

3.2.1. OBTAINS TOOLS AND TRAVELS TO AND FROM SUPPORT EQUIPMENT STORAGE AREA.

3.2.2. INSPECTS AND PERFORMS PREVENTIVE MAINTENANCE PRIOR TO USE AND DURING OPERATION IAW T.O.

3.2.3. COMPLIES WITH PREVENTIVE MAINTENANCE REQUIREMENT. Removes gages, transports to PMEL for calibration, returns, and reinstalls.

3.2.4. COMPLETES PAPERWORK.

3.3. PERFORMS NONRECURRING MAINTENANCE. Obtains tools, travels to and from LOX/LIN area, troubleshoots, researches part number, obtains part, repairs or replaces part, performs functional check, performs corrosion control, and completes paperwork.

3.4. PERFORMS DAILY INVENTORY OF CRYOGENIC PRODUCT. Travels to and from cryogenic storage area, determines quantity gauge reading, prepares inventory sheet, and provides inventory status to accounting section.

3.5. RECEIVES CRYOGENIC PRODUCT. Connects hose, opens tank fill valve, receives product, monitors quantity gauge, closes tank valves, and documents receipt and product loss paperwork.

3.5.1. RECEIVES LOX.

3.5.2. RECEIVES LIN.

3.5.3. TRAVELS TO AND FROM LOX STORAGE AREA FOR RECEIPT.

3.5.4. TRAVELS TO AND FROM LIN STORAGE AREA FOR RECEIPT.

3.6. ISSUES CRYOGENIC PRODUCT. Receives storage tank maintenance form, receives cart and/or ground servicing unit maintenance forms, grounds cart as required, connects hose, opens tank and cart valves, issues product, monitors quantity gauge, closes valves, performs all tasks as required, and completes paperwork.

3.6.1. ISSUES TO LOX SERVICING CART.

3.6.2. ISSUES TO LIN SERVICING CART.

3.6.3. TRAVELS TO AND FROM LOX STORAGE AREA FOR ISSUE.

3.6.4. TRAVELS TO AND FROM LIN STORAGE AREA FOR ISSUE.

3.6.5. PERFORMS QUALITY CONTROL. Draws LOX/LIN sample for odor and purity and completes paperwork.

3.7. TRANSFERS CRYOGENIC PRODUCT. Transfers LOX or LIN from one tank to another for inspection.

4. QUALITY CONTROL INSPECTION:

4.1. PERFORMS QUALITY CONTROL INSPECTION. Prepares for inspection by reviewing responsibility, current project, and programs; reviews previous inspection report of the section to be inspected, Inspector General (IG) report, and staff assistance visit report; gathers required equipment; inspects facility, equipment, organizational tank, and management procedure for safety, efficiency, and compliance with directive; evaluates personnel performance, puts away equipment, briefs supervisor, and files inspection record and report.

4.1.1. PERFORMS 90/180 DAY INTERNAL INSPECTION:

4.1.1.1. PERFORMS SECURITY INSPECTION.

4.1.1.2. PERFORMS TRAINING INSPECTION.

4.1.1.3. PERFORMS CRYOGENIC INSPECTION.

4.1.1.4. PERFORMS ACCOUNTING/ADMINISTRATION INSPECTION.

4.1.1.5. PERFORMS DISTRIBUTION INSPECTION.

4.1.1.6. PERFORMS SAFETY INSPECTION.

4.1.1.7. PERFORMS BULK STORAGE INSPECTION.

4.1.2. PERFORMS SPOT CHECK.

4.1.3. PERFORMS SPECIAL SUBJECT INSPECTION.

4.1.4. PERFORMS FOLLOW ON INSPECTION AFTER DISCREPANCY IS CLEARED.

4.1.5. PROVIDES TECHNICAL ASSISTANCE. Briefs and provides technical assistance to supported organization.

4.1.6. MAINTAINS DANGER TAG. Identifies safety hazard, prepares danger tag and attaches to equipment or facility removed from service, annotates AFTO Form 150, Base Fuels Sampling and Testing Record, and danger tag logs; notifies Fuels Management Office, Fuels Control Center, and Wing Safety Office of tagged equipment or facility; inspects and removes danger tag upon notification that system is ready for return to service, and closes out log.

4.1.7. REPORTS MATERIAL DEFICIENCY. Identifies defective/condemned equipment, prepares quality deficiency report, forwards one copy to equipment office of primary responsibility (OPR), receives response from OPR, follows response instructions, and files report and response.

4.2. PERFORMS PETROLEUM, OIL, AND LUBRICANT (POL) QUALITY CONTROL TESTING:

4.2.1. DRAWS SAMPLE. Gathers required equipment, draws sample for fuels test from bulk storage, mobile distribution, hydrant distribution, aircraft sump, fuel bowser, support equipment, organizational tank, and cryogenics storage; and puts away equipment.

4.2.1.1. DRAWS SAMPLE USING IN-LINE SAMPLER.

4.2.1.2. DRAWS SAMPLE USING WEIGHTED BOTTLE METHOD.

4.2.1.3. DRAWS SAMPLE USING BACON BOMB.

4.2.1.4. DRAWS SAMPLE USING DRUM THIEF.

4.2.1.5. DRAWS SAMPLE USING CRYOGENICS SAMPLER.

4.2.2. SHIPS SAMPLE TO AREA LABORATORY. Prepares sample and container for shipment, records sample information, inspects sample for proper amount of product, appropriate container, and cleanliness of container; prepares required form and paperwork and attaches to sample, forwards sample to transportation, records laboratory test result, files report when received from laboratory, and resamples when required.

4.2.3. PERFORMS FUELS TEST. Gathers required equipment in laboratory, performs fuels test IAW applicable technical publication, records result on AFTO Form 150, or updates computer.

4.2.3.1. PERFORMS TIME FILTRATION TEST.

4.2.3.2. PERFORMS PARTICLE ASSESSMENT TEST.

4.2.3.3. PERFORMS CRYOGENIC SAMPLER TEST.

4.2.3.4. PERFORMS DRUM THIEF TEST.

4.2.3.5. PERFORMS FUEL SYSTEM ICING INHIBITOR (FSII) TEST.

4.2.3.6. PERFORMS FUEL SOLIDS DETERMINATION TEST.

4.2.3.7. PERFORMS CONDUCTIVITY ADDITIVE TEST.

4.2.3.8. PERFORMS FLASH POINT TEST.

4.2.3.9. PERFORMS SPECIFIC GRAVITY TEST.

4.2.3.10. PERFORMS VISUAL INSPECTION TEST.

4.2.3.11. PERFORMS FREE WATER DETERMINATION TEST USING AERONAUTICAL ENGINEER LABORATORY (AEL).

4.2.3.12. PERFORMS FIBER TEST.

4.2.3.13. PERFORMS SULFIDE TEST.

4.2.3.14. PERFORMS CLOUD POINT TEST.

4.2.3.15. PERFORMS MICROSCOPIC ANALYSIS.

4.3. PERFORMS LABORATORY EQUIPMENT MAINTENANCE:

4.3.1. CLEANS AND MAINTAINS SAMPLING EQUIPMENT. Cleans and maintains sampling equipment IAW applicable technical publication.

4.3.2. MAINTAINS AND ADJUSTS TEST EQUIPMENT. Performs electrical continuity testing of electrostatic ground wire connections or other test, calibrates inventory equipment, and makes minor adjustment.

4.3.3. DELIVERS SAMPLE BOTTLE AND SAMPLER. Gathers sample equipment, places in a container, and deposits at a predesignated location.

4.3.4. DISPOSES OF TESTED FUEL AND CHEMICAL. Empties tested fuel and chemical into active storage or contamination container upon completion of test.

4.3.5. MAINTAINS CRASHED AIRCRAFT SAMPLING KIT. Inventories, inspects, and replenishes the kit after each use.

4.3.6. MAINTAINS BASE SERVICE STATION. Inventories, inspects, and performs organizational maintenance on base service station.

4.3.7. MAINTAINS UNDERGROUND FUEL LEAK DETECTION SYSTEM (TRACER SYSTEM):

4.3.7.1. PREPARES SAMPLING PORT.

4.3.7.2. INOCULATES FUEL TANK.

4.3.7.3. TAKES SAMPLE.

4.3.7.4. PACKS AND SHIPS SAMPLE.

4.3.7.5. MAINTAINS UNDERGROUND FUEL LEAK DETECTION EQUIPMENT.

4.4. PERFORMS TRAVEL:

4.4.1. TRAVELS TO AND FROM DAILY SPOT CHECK/SAMPLING LOCATION.

4.4.2. TRAVELS TO AND FROM WEEKLY SAMPLE LOCATION.

4.4.3. TRAVELS TO AND FROM 14-DAY SAMPLING LOCATION.

4.4.4. TRAVELS TO AND FROM MONTHLY SAMPLE LOCATION.

4.4.5. TRAVELS TO AND FROM DELIVERY/SOURCE RECEIPT SAMPLING LOCATION.

4.4.6. TRAVELS TO AND FROM 90-DAY LOX/LIN LOCATION.

4.4.7. TRAVELS TO AND FROM SEMI-ANNUAL INSPECTION LOCATION.

5. ACCOUNTING:

5.1. PROCESSES AVIATION FUELS ACCOUNT:

5.1.1. AUDITS ISSUE DOCUMENT:

5.1.1.1. AUDITS AF FORM 1233, BULK STORAGE SUMMARY. Receives AF Form 1233 from Bulk Storage for each grade of bulk fuel handled, reviews for accuracy, checks beginning and ending meter readings on AF Form 1233 against previous day meter readings, and posts AF Form 1237, Inventory (Fuels/Missile Propellants).

5.1.1.2. AUDITS AF FORM 1232, BULK FUEL ISSUE/DEFUEL SUMMARY, AGAINST AF FORM 1994, FUELS ISSUE/DEFUEL DOCUMENT (DOD); AND AF FORM 1995, FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD); OR CONSOLIDATED ISSUE FORM.

5.1.1.3. AUDITS AF FORM 1232 AGAINST AF FORM 1233.

5.1.1.4. AUDITS DD FORM 1348-1, DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT (FOR CRYOGENICS ISSUE ONLY). Prepares form or receives form from Cryogenics Storage and annotates issue quantities to AF Form 1237.

5.1.1.5. AUDITS AF FORM 791, AERIAL TANKER IN-FLIGHT ISSUE LOG. Receives form from issuing activity, reviews and researches issue data, and prepares computer input documents.

5.1.1.6. AUDITS AF FORM 1237.

5.1.2. AUDITS RECEIPT DOCUMENT:

5.1.2.1. AUDITS DEFENSE FUELS SUPPLY CENTER (DFSC) FORM 21.1, SOURCE IDENTIFICATION AND ORDERING AUTHORIZATION (SIOATH), OR EQUIVALENT. Receives form from Defense Fuels Region (DFR), reviews for accuracy, and makes corrections as necessary. Manually prepares DD Form 1886, SIOATH Control Record, as required.

5.1.2.2. AUDITS AF FORM 1231, RECORD OF RECEIPTS; DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT; AND COMMERCIAL DELIVERY TICKET. Receives form from Bulk Storage, verifies AF Form 1231 against the commercial delivery tickets, reviews form for proper entries, attaches computer produced DD Form 1348-1 and/or AF Form 2005, Issue/Turn in Request, to the commercial delivery ticket, annotates the AF Form 1237, and separates and forwards copies of the DD Form 250 and the commercial delivery ticket to the proper organization.

5.1.2.3. AUDITS DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT (FOR CRYOGENIC RECEIPT ONLY). Receives DD Form 250 and/or supplier delivery ticket from Cryogenics Storage, reviews form for accuracy, and posts receipt quantities to AF Form 1237.

5.1.3. AUDITS TRANSFER DOCUMENT, AF FORM 834, RECORD OF FUELS TRANSFERS (BETWEEN TANKS AND HYDRANT STATIONS). Receives AF Form 834 from bulk storage, reviews for accuracy, compares quantities transferred/received against the AF Form 1233, enters gain/loss on receipt form, and annotates necessary corrections.

5.1.4. AUDITS INVENTORY DOCUMENT:

5.1.4.1. PREPARES AF FORM 1234, FUELING UNIT INVENTORY. Manually prepares form for each grade of fuel, annotates refueling units in and out of service, computes inventory of units in and out of service, and transfers total to AF form 1235, Physical Inventory (Fuels/Missile Propellants).

5.1.4.2. AUDITS AF FORM 1235, PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS). Receives AF Form 1235 for each type of fuel product, checks for accuracy, computes totals, and checks Fuels-Strapping charts for conversion.

5.1.4.3. PREPARES/MAINTAINS AF FORM 1237, INVENTORY (FUELS/MISSILE PROPELLANTS). Manually prepares form for each fuels product, computes and records all issues and receipts, computes book inventory and records physical inventory from AF Form 1235, records the gain/loss difference between the book and physical inventory and determines if a variance adjustment is necessary, forwards form to accountable officer for review, and prepares computer input.

5.1.5. AUDITS CASH SALES DOCUMENT. Receives, reviews, and processes AF Form 1995, Fuels Issue/Defuel Document (Non-DOD). Prepares DD Form 1131, Cash Collection Voucher.

5.1.6. COORDINATES RESUPPLY OF FUEL:

5.1.6.1. COORDINATES WITH SUPPLIER. Coordinates via telephone with supplier, Fuel Storage, and Base Supply to schedule delivery. Confirms quantity to be received and resolves discrepancy.

5.1.6.2. COORDINATES WITH APPROPRIATE AGENCY. Coordinates with DFR, DFSC, and/or major command (MAJCOM) headquarters to resolve resupply difficulty.

5.1.6.3. PREPARES DD FORM 1155, ORDER FOR SUPPLIES OR SERVICES, OR EQUIVALENT FOR FUELS PRODUCT. Prepares form, coordinates with procurement office, forwards copies as required, and maintains receipt due-in file.

5.1.6.4. PREPARES REPORT. Researches, reviews, and prepares report as required by attachment 2 to AFR 144-1, Fuels Management (now designated as AFI 23-205).

5.1.6.4.1. PREPARES DD-A and L (A) 506 REPORT.

5.1.6.4.2. PREPARES LOG - SA (SA) 7308 REPORT.

5.1.7. PERFORMS TRAVEL:

5.1.7.1. PERFORMS TRAVEL TO AND FROM BASE SUPPLY. Travels to deliver/pickup automated report, miscellaneous item, or DD Form 1348-1.

5.1.7.2. PERFORMS TRAVEL TO AND FROM ACCOUNTING AND FINANCE OFFICE.

5.1.7.3. PERFORMS TRAVEL TO AND FROM BASE CONTRACTING OFFICE.

5.1.8. COMPUTES GAIN/LOSS TOLERANCE ANALYSIS. Computes gain/loss variance, formulates recommended tolerance for MAJCOM review and approval, computes monthly variance and compares to approved tolerance, and investigates and reports out-of-balance variance to MAJCOM.

5.1.9. OPERATES COMPUTER REMOTE. Operates computer remote for inputting requisition, receipt, issue, transfer, gain/loss and inventory data; performs inquiry, reverse posts, and due-in calculations.

5.1.10. REVIEWS COMPUTER MANAGEMENT PRODUCT. Reviews and validates daily, weekly, or monthly computer management product.

5.1.11. COORDINATES WITH BASE SUPPLY:

5.1.11.1. COORDINATES AND REVIEWS MONTHLY STANDARD BASE SUPPLY SYSTEM (SBSS) 1100 PROGRAM CHANGE WITH BASE SUPPLY.

5.1.11.2. COORDINATES WITH OTHER OFFICES WITHIN BASE SUPPLY ON PROBLEM, WORK AROUND, AND NEW PROCEDURE.

5.1.12. COMPLETES DFSC COMPUTER REPORTING:

5.1.12.1. COMPLETES DAILY TRANSACTION.

5.1.12.2. COMPLETES WEEKLY REPORTING.

5.1.12.3. COMPLETES MONTHLY REPORTING.

5.1.13. MAINTAINS DOCUMENT CONTROL FILE. Files accounting document by preparing, stamping, and annotating folder. Retrieves file as required.

5.2. PROCESSES GROUND FUELS ACCOUNT:

5.2.1. AUDITS ISSUE DOCUMENT:

5.2.1.1. AUDITS AF FORM 1233, BULK STORAGE SUMMARY. Receives AF Form 1233 from Bulk Storage for each grade of bulk fuel handled, reviews for accuracy, checks beginning and ending meter readings on AF Form 1233 against previous day meter readings, and posts AF Form 1237, Inventory (Fuels/Missile Propellants).

5.2.1.2. AUDITS AF FORM 1232 AGAINST AF FORMS 1994/1995 OR CONSOLIDATED ISSUE FORM.

5.2.1.3. AUDITS AF FORM 1232 AGAINST AF FORM 1233.

5.2.1.4. AUDITS AF FORM 857, USAF PROPELLANT SALE/TRANSFER/RETURN REPORT. Prepares form, checks form for accuracy and completeness, and enters quantity of recorded issue on AF Form 1237, Hydrazine and Argon.

5.2.1.5. AUDITS DD FORM 1348-1, DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT (FOR PROPELLANTS ISSUE ONLY). Prepares form or receives form from Cryogenics Storage and annotates issue quantities to AF Form 1237.

5.2.1.6. AUDITS AUTOMATED SERVICE STATION TRANSACTION. Audits Automated Service Station data output before input to Base Supply computer system.

5.2.2. AUDITS RECEIPT DOCUMENT:

5.2.2.1. AUDITS DFSC FORM 21.1, SIOATH OR EQUIVALENT. Receives form from DFR, reviews for accuracy, and makes corrections as necessary. Manually prepares DD Form 1886, SIOATH Control Record, as required.

5.2.2.2. AUDITS AF FORM 1231, RECORD OF RECEIPTS; DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT; AND COMMERCIAL DELIVERY TICKET. Receives form from Bulk Storage, verifies AF Form 1231 against the commercial delivery tickets, reviews form for proper entries, attaches computer produced DD Form 1348-1 and/or AF Form 2004-1, Supply Remote Data to the commercial delivery ticket, annotates the AF Form 1237, and separates and forwards copies of the DD Form 250 and the commercial delivery ticket to the proper organization.

5.2.2.3. AUDITS AF FORM 855, RECORD OF RECEIPTS (OF MISSILE PROPELLANTS). Receives form with shipping document from propellant storage and checks to ensure that amount received agrees with amount shipped by contractor.

5.2.3. AUDITS INVENTORY DOCUMENT:

5.2.3.1. AUDITS AF FORM 1235, PHYSICAL INVENTORY (FUELS/MISSILE PROPELLANTS). Receives AF Form 1235 for each type of fuel product, checks for accuracy, computes totals, and checks Fuels-Strapping charts for conversion.

5.2.3.2. AUDITS AF FORM 1236, DAILY SERVICE STATION SUMMARY. Prepares form, reviews issue receipt, inventories data for validity, and transfers data to AF Form 1237 for each grade of fuel.

5.2.3.3. PREPARES/MAINTAINS AF FORM 1237, INVENTORY (FUELS/MISSILE PROPELLANTS). Manually prepares form for each fuels product, computes and records all issues and receipts, computes book inventory and records physical inventory from AF Form 1235, records the gain/loss difference between the book and physical inventory and determines if a variance adjustment is necessary, forwards form to accountable officer for review, and prepares computer input.

5.2.4. AUDITS CASH SALES DOCUMENT. Receives, reviews, and processes AF Form 1995, Fuels Issue/Defuel Document (Non-DOD); prepares DD Form 1131, Cash Collection Voucher; and prepares DD Form 448, Military Interdepartmental Purchase Request.

5.2.5. PREPARES USAF GROUND FUEL IDENT-A-PLATE. Prepares AF Form 1295/1295A, USAF Ground Fuel Ident-a-plate, for recording non-VIMS vehicle and equipment issues; and prepares Vehicle Identification/MIN link (VILS) for the Automated Service Station for all VIMS and non-VIMS on base.

5.2.6. COORDINATES RESUPPLY OF FUEL:

5.2.6.1. COORDINATES WITH SUPPLIER. Coordinates via telephone with supplier, Fuel Storage, and Base Supply to schedule delivery. Confirms quantity to be received and resolves discrepancy.

5.2.6.2. PREPARES REPORT. Researches, reviews, and prepares report as required by attachment 2 to AFR 144-1, Fuels Management (now designated as AFI 23-205).

5.2.6.2.1. PREPARES LOG - SA (SA) 7308 REPORT.

5.2.6.2.2. PREPARES LOG - SA (AR) 7144, BULK FUELS REPORT.

5.2.7. PERFORMS TRAVEL. Performs travel to and from Accounting and Finance office.

5.2.8. PERFORMS CONSERVATION ANALYSIS. Compiles, reviews, and compares to established goals and provides consumption data to MAJCOM, base, and individual unit.

5.2.9. OPERATES COMPUTER REMOTE. Operates computer remote for inputting requisition, receipt, issue, transfer, gain/loss and inventory data; performs inquiry, reverse posts, and due-in calculations.

5.2.10. REVIEWS COMPUTER MANAGEMENT PRODUCT. Reviews and validates daily, weekly, or monthly computer management product. Prepares branch chief briefing report from M34 report.

5.2.11. MAINTAINS DOCUMENT CONTROL FILE:

5.2.11.1. FILES ACCOUNTING DOCUMENT. Files accounting document by preparing, stamping, annotating folders, and filing and removing files as required.

5.2.11.2. FORWARDS FILE TO STAGING AREA. Removes and boxes up files and forwards to staging area. Retrieves files as required.

5.2.12. COORDINATES COMPUTER PROBLEM WITH BASE SUPPLY.

6. FUELS MANAGEMENT:

6.1. PERFORMS MISSION RELATED TASK:

6.1.1. DEVELOPS AND REVIEWS FUELS SUPPORT PLAN.**6.1.2. PERFORMS REFUELER REVALIDATION/RECOMPUTATION.****6.1.3. REVIEWS AND ANALYZES BULK FUEL GAIN/LOSS TOLERANCE/VARIANCE.****6.1.4. PROVIDES TECHNICAL GUIDANCE.****6.1.5. COORDINATES WITH OTHER AGENCY.** Coordinates with other agency, e.g., MAJCOM, Base Contracting, DFR, etc.**6.1.6. IMPLEMENTS DIRECTED CHANGE.****6.1.7. MANAGES VEHICLE CONTROL OFFICER (VCO) PROGRAM.****6.1.8. CONDUCTS ENVIRONMENTAL PROTECTION PROGRAM.****6.2. DIRECTS WORK CENTER ACTIVITY:****6.2.1. MONITORS WORK IN PROGRESS.****6.2.2. PREPARES FUELS RELATED CORRESPONDENCE.****6.2.3. PROVIDES FUELS RELATED GUIDANCE TO UNIT STAFF:****6.2.3.1. PROVIDES GUIDANCE TO SAFETY COMMITTEE.****6.2.3.2. PROVIDES GUIDANCE TO WAR READINESS MATERIAL (WRM) COMMITTEE.****6.2.3.3. PROVIDES GUIDANCE TO POST COMMITTEE.****6.3. ADMINISTERS FUELS TRAINING:****6.3.1. DEVELOPS AND CONDUCTS (NON-UNIT TRAINING ASSEMBLY [UTA]) FUELS-RELATED TRAINING PROGRAM:****6.3.1.1. DEVELOPS LESSON PLAN AND TRAINING MATERIAL.****6.3.1.2. CONDUCTS TRAINING.****6.3.1.3. DOCUMENTS TRAINING ACCOMPLISHED.****6.3.2. PROVIDES SPECIALIZED TRAINING.****6.3.3. PREPARES FOR UTA FUELS-RELATED TRAINING:****6.3.3.1. DEVELOPS LESSON PLAN AND TRAINING MATERIAL.****6.3.3.2. CONDUCTS FUELS-RELATED UTA TRAINING.**

INDIRECT: Indirect work involves tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are Supervision, Administration, Meetings, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the Standard Indirect Description.

STANDARD MANPOWER TABLE											
WORK CENTER/FAC			APPLICABILITY MAN-HOUR RANGE								
Liquid Fuels/FAC4170SE			1569.77 - 2616.29								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Fuels Fuels	631XX 631X0	CIV CIV	1 10	1 11	1 12	1 13	1 14	1 15	1 16	1 17	
TOTAL			11	12	13	14	15	16	17	18	
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
TOTAL											